

REMARKS

Claims 1-28 are pending in this application. By this Amendment, claims 1, 12, 14, 15 and 18 are amended; claim 11 is canceled without prejudice to or disclaimer of the subject matter found therein; and claims 21-28 added. In addition, the title has been amended.

The amendment to the title is in response to the objection thereto found in paragraph 4, on page 2 of the Office Action.

Applicants appreciate the indication that claims 18-20 are allowed and that 5-7, 9, 11 and 17 contain allowable subject matter. Claim 18 has been amended to provide a consistent reference throughout the claim to "the rear wall". Further, it is unclear whether claim 9 is allowable or is rejected as paragraph 9, on page 5 of the Office Action, identifies claim 9 as part of a rejection. The rejection is addressed below.

Applicants appreciate the courtesies shown to Applicants' representatives by Examiner Grainger in the October 11 personal interview. Applicants' separate record of the substance of the interview is incorporated into the following remarks.

In paragraph 6, on page 3 of the Office Action, claims 1-4, 12, 13, 15 and 16 were rejected under 35 U.S.C. §102(e) as being anticipated by Ito et al. U.S. Patent No. 6,546,213 (Ito). The rejection is respectfully traversed.

Applicants' claim 1 is directed to a developing device that is attachable to and detachable from a main casing of an image forming apparatus, comprising a developing agent container that contains a developing agent; a developing agent carrier that carries the developing agent; a supply device that is disposed facing the developing agent carrier and supplies the developing agent stored in the developing agent container to the developing agent carrier, the developing agent carrier and the supply device disposed below the developing agent container when the developing device is mounted in the main casing of the image forming apparatus; and a first wall that is disposed between the developing agent

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container and the supply device and covers at least a part of an upper portion of the supply device when the supply device is mounted in the main casing of the image forming apparatus, wherein the developing agent carrier and the supply device are urged into contact with each other at the facing position, and move in opposite directions at the contact position.

Claim 1 has been amended to include the allowable subject matter of claim 11. Thus, claim 1 and claims 2-4, as well as claims 5-10, and 21 depending therefrom, are allowable.

Applicants' claim 12 calls for a developing device that is attachable to and detachable from a main casing of an image forming apparatus, comprising a developing agent container that contains a developing agent; a developing agent carrier that carries the developing agent; a supply device that is disposed facing the developing agent carrier and supplies the developing agent stored in the developing agent container to the developing agent carrier, the developing agent carrier and the supply device disposed below the developing agent container when the developing device is mounted in the main casing of the image forming apparatus; and a first means that prevents a weight of the developing agent contained in the developing agent container from directly acting on the supply device.

Applicants' claim 15 is directed to an image forming apparatus, comprising a main frame; and a developing unit that is attachable to and detachable from the main frame, the developing unit comprising a developing agent container that contains a developing agent; a developing agent carrier that carries the developing agent; a supply device that is disposed facing the developing agent carrier and supplies the developing agent stored in the developing agent container to the developing agent carrier, the developing agent carrier and the supply device disposed below the developing agent container when the developing device is mounted in the main casing of the image forming apparatus; and a first wall disposed between the developing agent container and the supply device and extends completely over the entirety

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of the supply device when the developing device is mounted in the main casing of the image forming apparatus. Ito does not disclose such devices.

Ito is directed to a toner cartridge used in an image forming apparatus. In particular the thrust of Ito's invention is to identify remaining toner. The only disclosure in Ito of the relationship between the toner cartridge 17 and the print process cartridge 16 is found in Fig. 2 and is described in col. 5, lines 1-32. As can be plainly seen in Fig. 2, the opening 24 has a significant portion that is directly above the toner-supplying roller 23, i.e., the opening 24 of Ito extends over a substantial portion of the toner-supplying roller 23. Thus, the entire weight of toner is passed down through the opening 24 and rests, to a very significant degree, directly on the toner-supplying roller 23. Therefore, the toner acts directly on the toner-supplying roller 23, i.e., the supply device. No matter how one defines walls in Ito, there is no first means that prevents a weight of the developing agent contained in the developing agent container from directly acting on the supply device or extends completely over the entirety of the supply device, i.e., the toner-supplying roller 23, as found in Applicants' claims 12 and 15 respectively.

In fact, Ito is a type of device that Applicants invention addresses in that it dumps toner directly onto the supply roller. Further, its structure does not lead Ito to circulating the toner as described in Applicants' specification and which is one basis for the first wall found in Applicants' invention. Because Ito does not literally disclose Applicants' inventions of claims 12 and 15 it cannot anticipate those claims. Further, Ito cannot anticipate the subject matter of claim 13 depending from claim 12 and claim 16 depending from claim 15 for all the reasons discussed above with respect to claims 12 and 15 and for the further features recited therein. Likewise, Ito does not suggest the claimed invention for the reasons discussed.

Additionally, with respect to claim 13, the claim calls for, among other items, a second means that prevents the developing agent from accumulating above the layer thickness

regulating member when the developing device is mounted in the main casing in the image forming apparatus. Although there is no description at all, in Ito, concerning such a result or a feature to preclude such a result, looking at Fig. 2, the blade 25 has an L-shaped configuration. This configuration would ensure that at least a portion of the toner does accumulate above the layer thickness regulating member, i.e., blade 25. Thus, Ito quite literally teaches away from the claimed invention. Such is not an anticipatory reference. Because Ito teaches away, it is also not a suggestive reference for claim 13.

Therefore it is respectfully requested the rejection be withdrawn.

In paragraph 9, on page 5 of the Office Action, claims 9 and 14 were rejected under 35 U.S.C. §103(a) as being unpatentable over Ito in view of Yaguchi et al., U.S. Patent Publication No. 2004/053153 (Yaguchi). The rejection is respectfully traversed.

Although Yaguchi is not prior art, being filed on September 11, 2003 whereas Applicants' priority date is March 28, 2003, Yaguchi does not teach what it is alleged to teach. The Office Action states that Yaguchi teaches a packed bulk density of greater than or equal to 0.646 grams/ml at an initial use. However, that is not what Yaguchi teaches. Yaguchi does not teach a bulk density of the toner, or developing agent, rather, in paragraph [0117] Yaguchi discusses a toner and its composition by percent weight. The only discussion of a bulk density deals with the 15% by weight of triiron tetroxide (Fe_3O_4) having a bulk density of 0.65 with a specific particle size. As Yaguchi's toner also has a polyester resin, a charge control agent, and a polypropylene wax, in addition to the triiron tetroxide, there is no indication of the bulk density for the toner, or developing agent, which is what is claimed by Applicants in claims 9 and 14.

On page 6 of the Office Action, in an apparent continuation of paragraph 9, claims 8 and 10 were rejected under 35 U.S.C. §103(a) as being unpatentable over Ito in view of Ishii et al., U.S. Patent No. 6,594,462 (Ishii). The rejection is respectfully traversed.

Ishii is directed to a totally different type of toner container, i.e., one that is arrayed horizontally, versus the vertical alignment of the claimed invention and Ito. As such, the Ishii container would not be a likely candidate for combining with Ito. Ishii's method of delivering the toner differs from Applicants' and Ito's devices. Further, the circulation pattern for the toner differs, thus the combination is improper, there being no motivation to combine them, and the combination cannot suggest the subject matter of claims 8 and 10 for those reasons as well as the fact that Ishii does not overcome the deficiencies of Ito with respect to claim 1 from which both claims 8 and 10 depend. It is therefore respectfully requested the rejection be withdrawn.

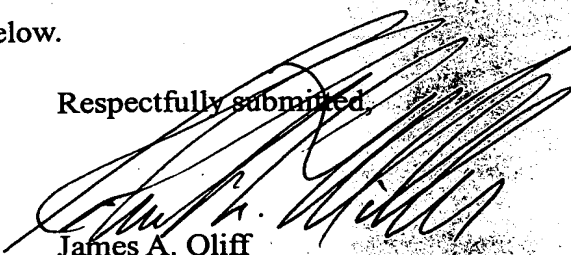
As to added claims 22, and claims 23-27 depending therefrom, and claim 28, these features are clearly supported at least by Figs. 2 and 4 as discussed at the interview.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-28 are earnestly solicited.

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Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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